~~DRAFT~~ GUIDELINES ON THE DESIGN AND IMPLEMENTATION OF IDENTIFICATION SYSTEMS TO ACHIEVE ANIMAL TRACEABILITY

Terrestrial Animal Health Standards Commission Report - March 2006

Article 1

Introduction and objectives

These guidelines are based on the general principles presented in Article 3.5.1.1. The Guidelines outline for Member~~ Countrie~~s the basic elements that need to be taken into account in the design and implementation of an *animal identification system* to achieve *animal traceability*. Whatever *animal identification system* the country adopts, it should comply with relevant OIE standards, including Part 4 for animals and animal products intended for export. Each country should design a program in accordance with the scope and relevant performance criteria to ensure that the desired *animal traceability* outcomes can be achieved.

Article 2

~~**Definitions**~~ Glossary

~~These following definitions apply t~~For the purpose of this Appendix.

***Desired outcomes*:** describe the overall goals of a programme and are usually expressed in qualitative terms, e.g. 'to help ensure that animals and/or animal products are safe and suitable for use'. Safety and suitability for use could be defined in terms such as animal health, food safety, trade and aspects of animal husbandry ~~husbandry aspects~~.

Performance criteria: are specifications for performance of a programme and are usually expressed in quantitative terms, such as 'all animals can be traced to the *establishment* of birth within 48 hours of an enquiry'.

Reporting: means advising the *Veterinary ~~Administration~~ Authority* in accordance with the procedures listed in the programme.

Scope: specifies the targeted species, population and/or production/trade sector within a defined area (country, zone) or compartment that is the subject of the identification and traceability programme.

Transhumance: periodic/seasonal movements of *animals* between different pastures ~~or premises~~ within or between countries.

Article 3

Key elements of the animal identification system

1. Desired outcomes

Desired outcomes should be defined through consultation between the *Veterinary ~~Administration~~ Authority* and other parties, which should include (depending on scope) animal producers and food processors, private sector veterinarians, scientific research organisations and other government agencies. Desired outcomes may be defined in terms of any or all of the following:

a) animal health (e.g. *disease* surveillance and notification; detection and control of *disease*; vaccination programmes);

b) public health (e.g. surveillance and control of zoonotic diseases and food safety);

c) management of emergencies e.g. natural catastrophies or man-made events;

d) trade (support for inspection and certification activities of *Veterinary Services*, as described in Part 4 which reproduces model international veterinary certificates);

e) aspects of animal husbandry ~~aspects (e.g.~~ such as animal performance, and genetic data).

2. Scope

Scope should also be defined through consultation between the *Veterinary ~~Administration~~ Authority* and other parties, as discussed above. The scope of *animal identification systems* is often based on the definition of a species and sector, to take account of particular characteristics of the farming systems e.g. pigs in pork export production; poultry in a defined compartment; cattle within a defined FMD free *zone*. Different systems will be appropriate according to the production systems used in countries and the nature of their industries and trade.

3. Performance criteria

Performance criteria are also designed in consultation with other parties, as discussed above. The performance criteria depend on the desired outcomes and scope of the program. They are usually described in quantitative terms according to the epidemiology of the disease. For example, some countries consider it necessary to trace susceptible animals within 24-48 hours when dealing with highly contagious *diseases* such as FMD and avian influenza. For food safety, animal tracing to support investigation of incidents may also be urgent. For chronic animal *diseases* that are not ~~a~~ zoonosis, ~~such as bovine para~~tuberculosis it may be considered appropriate that animals can be traced over a longer period ~~within 30 days~~.

4. Preliminary studies

In designing *animal identification systems* it is useful to conduct preliminary studies, which should take into account:

a) animal populations, species, distribution, herd management,

b) farming and industry structures, production and location,

c) animal health,

d) public health,

e) trade issues,

f) aspects of animal husbandry,

~~f~~g) zoning and compartmentalisation,

~~g~~h) animal movement patterns (including transhumance),

~~h~~i) information management and communication,

~~i~~j) availability of resources (human and financial),

~~j~~k) social and cultural aspects,

~~k~~l) stakeholder knowledge of the issues and expectations,

~~l~~m) gaps between current enabling legislation and what is needed long term,

~~m~~n) international experience,

~~n~~o) national experience,

~~o~~p) available technology options,

q) existing identification system(s),

r) expected b~~B~~enefits from the *animal identification systems* and *animal traceability* ~~scheme~~ and to whom they accrue.

Pilot projects may form part of the preliminary study to test the *animal identification system* and *animal traceability* and to gather information for the design and the implementation of the programme.

Economic analysis may consider costs, benefits, funding mechanisms and sustainability.

5. Design of the programme

a) General provisions

The programme should be designed in consultation with the stakeholders to facilitate the implementation of the *animal identification system* and *animal traceability*. It should take into account the scope, performance criteria and desired outcomes as well as the results of any preliminary study.

All the specified documentation should be standardised as to format, content and context.

To protect and enhance the integrity of the system, procedures should be incorporated into the design of the programme to prevent, detect and correct errors e.g. use of algorithms to prevent duplication of identification numbers and to ensure plausibility of data ~~in an electronic database~~.

b) Means of animal identification

The choice of a physical animal identifier should ~~take into account~~ consider elements such as the durability, human resources, species and age of the animals to be identified, required period of identification, ~~animal welfare~~, cultural aspects, animal welfare, technology, compatibility and relevant standards, farming practices, production systems, animal population, climatic conditions, resistance to tampering, trade considerations, cost, and retention and readability of the identification method.

The *Veterinary ~~Administration~~ Authority* is responsible for approving the materials and equipment chosen, to ensure that these means of animal identification comply with technical and field performance specifications, and for the supervision of their distribution. The *Veterinary ~~Administration~~ Authority* is also responsible for ensuring that identifiers are unique and are used in accordance with the requirements of the *animal identification system*.

The *Veterinary ~~Administration~~ Authority* should establish procedures for *animal identification* and *animal traceability* including:

i) the time period within which an animal born on an *establishment* should be identified;

ii) when a~~A~~nimals are ~~imported~~ introduced into an *establishment*;

iii) when an animal loses its identification or the identifier becomes unusable;

iv) arrangements and rules for the destruction and/or reuse of identifiers.

v) penalties for the tampering and/or removal of official animal identification devices.

Where group identification without a physical identifier is adequate, documentation should be created specifying at least the number of animals in the group, the species, the date of identification, the person legally responsible for the animals and/or establishment. This documentation constitutes a unique group identifier and it should be updated to be traceable if there are any changes.

Where all animals in the group are physically identified with a group identifier, documentation should also specify the unique group identifier.

c) Registration

Procedures need to be incorporated into the design of the programme in order to ensure that relevant events and information are registered in a timely and accurate manner.

Depending on the scope, performance criteria and desired outcomes, records as described below should specify, at least, the species, the unique animal or group identifier, the date of the event, the identifier of the *establishment* where the event took place, and the code for the event itself.

i) Establishments/owners or responsible keeper

Establishments where animals are kept should be identified and registered, including at least their physical location (such as geographical coordinates or street address), the type of *establishment* and the species kept. The register should include the name of the person legally responsible for the animals at the *establishment*.

The types of *establishments* that may need to be registered include holdings (farms), assembly centres (e.g. agriculture shows and fairs, sporting events, transit centres, breeding centres), *markets*, *abattoirs*, rendering plants, dead stock collection points, transhumance areas, centres for necropsy and diagnosis, research centres, zoos, *border posts*, *quarantine stations*.

In cases where the registration of *establishments* is not applicable e.g. some transhumance systems, the animal owner, the owner's place of residence and the species kept should be recorded.

ii) Animals

Animal identification and species should be registered for each *establishment*/owner. Other relevant information about the animals at each *establishment*/owner may also be recorded e.g. date of birth, production category, sex, breed, *animal identification* of the parents.

iii) Movements

The *registration* of animal movements is necessary to achieve *animal traceability*. When an animal is introduced into or leaves an *establishment*, these events constitute a movement.

Some countries classify birth, *slaughter* and *death* of the animal as movements.

The information registered should include the date of the movement, the *establishment* from which the animal or group of animals was dispatched, the number of animals moved, the destination *establishment*, and any *establishment* used in transit ~~*establishment*~~.

When *establishments* are not registered as part of the *animal identification system*, ownership and location changes constitute a movement record. Movement recording may also include means of *transport* and the *vehicle* identifier.

Procedures should be in place to maintain *animal traceability* during *transport* and when animals arrive at and leave an *establishment*.

iv) Events other than movements

The following events may also be *registered*:

- birth, *slaughter* and *death* of the animal (when not classified as a movement),
- attachment of the unique identifier to an animal,
- change of ownership regardless of change of *establishment*,
- observation of an animal on an *establishment* (testing, health investigation, health certification, etc.),

- animal imported: a record of the *animal identification* from the *exporting country* should be kept and linked with the *animal identification* assigned in the *importing country*,
- animal exported: a record of the *animal identification* from the *exporting country* should be provided to the *Veterinary ~~Administration~~ Authority* in the *importing country*,
- animal identifier lost or replaced,
- animal missing (lost, stolen, etc.),
- animal identifier retired (at *slaughter*, following loss of the identifier or death of the animal on a farm, at diagnostic laboratories, etc.).

d) Documentation

Documentation requirements should be clearly defined and standardised, according to the scope, performance criteria and desired outcomes and supported by the legal framework.

e) Reporting

Depending on the scope, performance criteria and desired outcomes, relevant information (such as *animal identification*, movement, events, changes in numbers of livestock, *establishments*) should be reported to the *Veterinary ~~Administration~~ Authority* by the person responsible for the animals.

f) Information system

An information system should be designed according to the scope, performance criteria and desired outcomes. This may be paper based or electronic. The system should provide for the collection, compilation, storage and retrieval of information on matters relevant to *registration*. The following considerations are important:

- have the potential for linkage to traceability in the other parts of the food chain;
- minimi~~s~~sze duplication;
- relevant components, including databases, should be compatible;
- confidentiality of data ;
- appropriate safeguards to ~~avoid~~ prevent the loss of data, including ~~backup~~ a system for backing up the data ~~systems~~.

The Veterinary ~~*Administration*~~ *Authority* should have access to this information system as appropriate to meet the scope, performance criteria and desired outcomes.

g) Laboratories

The results of diagnostic tests should record the animal identifier or the group identifier and the *establishment* where the sample was collected.

h) *Abattoirs*, rendering plants, dead stock collection points, markets, assembly centres

Abattoirs, rendering plants, dead stock collection points, *markets* and assembly centres should document arrangements for the maintenance of *animal identification* and *animal traceability* in compliance with the legal framework.

These *establishments* are critical points for control of animal health and food safety.

Animal identification should be recorded on documents accompanying samples collected for analysis.

The components of the *animal identification system* operating within *abattoirs* should complement and be compatible with arrangements for tracking animal products throughout the food chain. At an *abattoir*, *animal identification* should be maintained during the processing of the animal's carcass until the carcass is deemed fit for human consumption.

The *animal identification* and the *establishment* from which the animal was dispatched should be registered by the *abattoir,* rendering plant and dead stock collection points.

Abattoirs, rendering plants and dead stock collection points should ensure that identifiers are collected and disposed of according to the procedures established and regulated within the legal framework. These procedures should minimize the risk of unauthorized reuse and, if appropriate, should establish arrangements and rules for the reuse of identifiers.

Reporting of movement by *abattoirs*, rendering plants and dead stock collection points should occur according to the scope, performance criteria and desired outcomes and the legal framework.

i) Penalties

Different levels and types of penalties should be defined in the programme and supported by the legal framework

~~j) Commercial arrangements~~

~~An animal identification system requires producers, processors and others (depending on the design of the system) to purchase equipment. There are many possible commercial arrangements that will have a variety of implications for the uptake of the animal identification system.~~

~~k) Transition planning~~

~~Any transition from an existing animal identification system needs to be designed to ensure it is easy for users of the existing system to make the change and to insure that data integrity is maintained during the transition and integrated into the new animal identification system.~~

~~l) Use of incentives~~

~~Depending on the drivers for participation in the animal identification scheme, incentives may be useful to encourage early adoption of the system or to fill capability, capacity or technology gaps.~~

6. Legal framework

The *Veterinary* ~~*Administration*~~ *Authority*, with other relevant governmental agencies and in consultation with stakeholders, should establish a legal framework for the implementation and enforcement of *animal identification system* and *animal traceability* in the country. The structure of this framework will vary from country to country.

Animal identification, *animal traceability* and animal movement should be under the responsibility of the *Veterinary* ~~*Administration*~~ *Authority*.

This legal framework should address:

i) desired outcomes and scope;

ii) obligations of the *Veterinary* ~~*Administration*~~ *Authority* and other parties;

iii) organisational arrangements, including the choice of technologies and methods used for the *animal identification system* and *animal traceability*;

iv) management of animal movement;

v) confidentiality of data;

vi) data access / accessibility;

vii) checking, verification, inspection and penalties;

viii) where relevant, funding mechanisms;

ix) where relevant, arrangements to support a pilot project.

7. Implementation

a) Action plan

For implementing the *animal identification system*, an action plan should be prepared specifying the timetable and including the milestones and performance indicators, the human and financial resources, and checking, enforcement and verification arrangements.

The following activities should be addressed in the action plan:

i) Communication

The scope, performance criteria, desired outcomes, responsibilities, movement and registration requirements and sanctions need to be communicated to all parties.

Communication strategies need to be targeted to the audience, taking into account elements such as the level of literacy (including technology literacy) and spoken languages.

ii) Training programmes

It is desirable to implement training programmes to assist the *Veterinary Services* and other parties.

iii) Technical support

Technical support should be provided to address practical problems.

b) Checking and verification

Checking activities should start at the beginning of the implementation to detect, prevent and correct errors and to provide feedback on programme design.

Verification should begin after a preliminary period as determined by the *Veterinary ~~Administration~~* *Authority* in order to determine compliance with the legal framework and operational requirements.

c) Auditing

Auditing should be carried out under the authority of the *Veterinary ~~Administration~~* *Authority* to detect any problems with the *animal identification system* and *animal traceability* and to identify *possible* improvements.

d) Review

The programme should be subject to periodic review, taking into account the results of *checking*, verification and auditing activities.